

NO. I.

THE ART  
OF  
MASSAGE.

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TRACTS ON MASSAGE.

TRANSLATED FROM THE

GERMAN OF REIBMAYR, WITH NOTES,

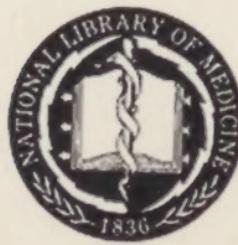
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## THE ART OF MASSAGE.

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GERMAN OF REIBMAYR, WITH NOTES,

BY

BENJAMIN LEE, A.M., M.D., PH.D.,

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## TRANSLATOR'S PREFACE.

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I PROPOSE to issue, in the shape of short tracts, for the benefit of the busy practitioner, the substance of a useful little treatise by Dr. Albert Reibmayr, of Vienna, entitled "Massage and its Utilization in the various Departments of Medical Practice." An acquaintance of twenty-five years with this important therapeutic means, enables me to assert without hesitation its unquestionable and too little recognized value, while the communications which I am receiving from physicians in different parts of the country, in regard to the paper upon this subject which I had the honor to read before the recent meeting of the Medical Society of the State of Pennsylvania, under the title, "Massage the latest Hand-maid of Medicine," convince me that the time is ripe for an enunciation of its principles and a description of its

practice. The present tract will be shortly followed by others on "The Physiological Effects of Massage," and on its "Employment in Medicine," in "Surgery," in "Midwifery," in "Gynæcology," and in "Ophthalmology." A bibliography will be appended to each tract for the accommodation of those who desire to procure their information at first hand. The few notes which I shall add will be placed in brackets.

Since penning the above, I have received from the author a short treatise, liberally illustrated with wood-cuts, on the "Art of Massage," portions of which I shall incorporate in the text without special reference.

BENJAMIN LEE,  
313 SOUTH 15TH STREET, PHILADELPHIA.

## AUTHOR'S INTRODUCTION.

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DURING the last decade of the present century MASSAGE has been rapidly winning the recognition both of physicians and of the invalid public, until it to-day holds equal rank in general therapeutics with other physical methods of treating disease, such as Hydrotherapy, Remedial Gymnastics, and Electrotherapy.

The relatively short time which has elapsed since it celebrated its *renaissance*, and the fact that its spread and development first took place in foreign countries, account for the scanty and incomplete character of its German literature. Not until the last ten years did German medical writers begin to notice this therapeutic means; and their contributions, contained principally in journals and periodicals, usually describe but a single one of its manifold applications. It is very difficult, therefore, for the practising physician adequately to picture to himself the extended field of usefulness which it already occupies in all branches of medicine. If there is still much clinging to it which cannot stand the severe scientific criticism of modern medicine, we may excuse this on the ground that the method is still in its infancy, and—that other methods fare no better.

It is the object of this work to collect the scattered testimony as to the efficacy of massage as a mode of treatment, and to furnish the practitioner with as com-

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plete a representation as may be of its present capabilities. It is also hoped, by means of a precise description of its various modes of application, to enable him to adopt and utilize it in his own practice.

The history of Massage, as demonstrated by WEISS\* and RITTERFELD,† is very ancient, written allusions to it reaching back among the Chinese to a period three thousand years before our era. Older still than their writings are their oral traditions with reference to the same subject. The civilized nations of antiquity employed it, both as a therapeutic and as a hygienic means. Among the Greeks and Romans it was resorted to especially after the bath, and this custom still prevails among the Orientals. After the struggles of the circus, it was the function of massage to dissipate the resulting contusions and extravasations, and restore pliability to the stiffened joints.

During the Middle Ages, it vanished completely from the medical schools, receiving only an occasional recognition in connection with midwifery. It thus fell completely into the hands of the laity, and this unfortunately is sufficient ground, in the minds of many physicians, for glancing askance upon a remedial agent of great value.

The first nation to re-discover this therapeutic treasure and rescue it from oblivion were the French. TISSOT (1780), MEIBOM (1795), and BONNET (1845),

\* BELA WEISS: Ueber Massage, etc. Wiener Klinik, 1879. Heft 11 and 12.

† RITTERFELD-CONFELD: Massage, Wiesbaden, 1881.

have laid us under obligations in promoting its regeneration. But the writings of these men scarcely attracted a passing notice, even in their own country, to say nothing of foreign lands.

To DR. MEZGER, of Amsterdam, and his pupils, BERGHMAN and HELLEDAY, is due the credit of having reduced massage to a system founded upon the basis of numerous experiments, and of earning for it the reputation of being a truly reliable remedial agency. His system possesses the great advantage of being as simple as it is clear, and should, therefore, be accepted by all adherents of this method of practice.

From the first, massage found speedy acceptance in the northern countries of Europe: England, Sweden, Norway, Denmark, and Holland; hence the literature of these nations on the subject is relatively rich. German surgeons began to occupy themselves with it, as already said, about ten years since, and the fact that it was warmly received by such men as BILLROTH, ESMARCH, GUSSENBAUER, MOSENGEIL, THIERSCH, and SCHMIDT, and found a permanent place in their clinics, must not be underestimated in accounting for its rapid spread in Germany and Austria. This is not sufficient, however, to entirely explain the popularity which it has attained in all quarters, in so short a period of time.

The principal reason is, that, in consequence of the progress of the modern natural sciences, especially their medical departments, physiology, pathological anatomy, and so on, the old routine-fettered modes of practice had fallen into complete discredit with think-

ing physicians. The aspiration after more rational remedial measures, which could to a certain extent maintain themselves before this scientific tribunal, was thus stimulated. In addition to this, the nihilism of Skoda on the one hand, and Homœopathy on the other, combined to seriously weaken the supremacy of routine medication, and thus the way was prepared for the physical methods of treatment, Hydrotherapy, the Swedish Remedial Gymnastics, Electrotherapy and Massage.

The successful results obtained by Priessnitz, Schrott, and others who had not enjoyed the advantages of a medical education, accomplished the rest; so that all these simple modes of treating disease speedily found numerous enthusiastic, and not seldom, we must allow, fanatical advocates among physicians as well as among the public.

Besides all this, Massage possesses the great advantage of being a method of practice which suits our skeptical age. Its results follow its employment so immediately —being often not simply visible to the eye, but recognizable by the touch, and even susceptible of measurement—that it must disarm the most complete skeptic, no doubt being possible as to the "*post hoc propter hoc.*" Farther, this therapeutical system answers better than any other to the more purely mechanical theory of the physiological processes of the human organism which are to-day in vogue. All these influences conspired to aid the rapid spread of massage, and its recognition by the medical world finally assured its success.

## THE ART OF MASSAGE.

[By *Massage* I understand the communication of motion to the tissues of the living human body from an external source for therapeutic purposes. It is thus distinguished from *Movements*, variously designated as Swedish Movements, Localized Movements, Remedial Gymnastics, and so on, which imply motion of entire limbs or of the trunk, through the medium of the joints, and from *Exercise*, which presupposes the exertion of the will, and therefore the communication of motion from an internal source. It may be *Immediate*, communicated directly to the tissues by the hand of the operator, or *Mediate*, communicated through the agency of mechanical contrivances or machines. In the latter case it matters not whether the motor power be the muscle of an operator or steam or electricity. But the latter sources of motion must of course be under intelligent and watchful supervision. The word *massage* comes to us from the Greek through the French, and means simply *Kneading*, the idea to be conveyed being that the operator works the flesh as the

baker works his dough. It is better to use the French word than to translate it into English, because the English equivalent is used to describe one of the particular modes of massage, and also because the former has now a well-established position and definite signification in scientific medical literature all over the world. The attempt to belittle the system by calling it "*rubbing*," an entirely inadequate designation, can only react on those who employ it, by indicating their partial education and their lack of familiarity with the recent medical literature of other countries.]

French writers upon this subject, among them ESTRADÈRE(1) in particular, have burdened the art with a large variety of procedures, having in point of fact quite immaterial differences: such as *stroking*, *friction*, *kneading*, *sawing*, *fulling*, *pinching*, *malaxation*, *percussion*, *chopping*, *clapping*, *pointed vibrations*, and *deep vibrations*.

At the present day we find that we can accomplish our results with the employment of much fewer modes of application, but on this very account we lay great stress upon the manipulations which should precede and follow massage proper. In the following chapters we shall see how important it is in many cases not to begin at once with massage of the affected part, but, commencing our operations upon the cardiac side, to manipulate first the contiguous *healthy* tissues. This *Introductory Massage*, should, wherever it is practicable, especially in the case of affections of the extremities, precede massage proper of the affected region.

It consists, essentially, in tolerably firm centripetal stroking of the surface, first with the palm of one hand—afterwards with those of both hands—the entire limb being in the second instance grasped immediately above the seat of disease and the pressure made principally with the radial borders of the hands. These manipulations are continued for two or three minutes, and usually extend as far as the next joint above. The flexure of that joint should receive especial attention and be subjected to very firm pressure, inasmuch as it is there that the larger venous and lymphatic trunks are found. This modification has also an important application when for any reason, such, for example, as excoriation of the surface or extreme sensitiveness of the inflamed parts, massage directly upon the injured or otherwise morbidly affected region is impossible. The importance of this preparatory procedure has been recognized by all authors. I have already elsewhere referred to its usefulness in chronic inflammations of the joints.\* In these cases, the deposits which form around the inflamed joints invariably extend upward along the lymphatics and bloodvessels between the sheaths of the muscles, the tendons, and the fascie. They are easily recognized as little rounded nodules, of varying consistence, usually very painful under firm pressure. As invariably, as the result of such inflammations, do we observe that certain contiguous groups of

\* REIBMAYR: The Treatment of Chronic Synovitis by Massage. Pester Med. Chirurg. Presse, 1883.

muscles begin to atrophy. From the investigations of LE FORT and VALTAT, it appears that this condition begins to develop very early. The groups which this atrophy attacks by preference, and to the greatest extent, are: at the knee, the *quadriceps*: at the shoulder, the deltoid first, subsequently the *supra-spinatus*, *infra-spinatus* and *pectoralis major*; at the hips, the *glutei*; at the elbow, the *biceps* and *brachialis internus*: at the ankle, the extensors of the foot. The articular inflammation insidiously and almost unnoticed propagates itself to these particular muscular groups, and in the form either of induration or of fatty degeneration exerts a prejudicial influence upon their nutritive processes, thus bringing about wasting of the individual muscular fibres. It must, therefore, be our especial aim in the treatment of these cases, to protect the contiguous muscles and prevent these deposits of exudation and the resultant atrophy. *We must invariably plant the lever of our massage here first*, and so doing we shall afterwards find no difficulty in restoring the joint itself to its normal condition. The permeability of the numerous lymphatics which have been plugged up by inflammatory detritus will thus be insured, and the process of absorption greatly facilitated. It is my habit in treating either acute or chronic inflammations of the joints to knead only the regions lying above the affected parts, as for example in the case of the knee, the muscles of the thigh, for the first week or ten days, and I thus save the patient much unnecessary suffering. By observing this precaution, serious irrita-

tion of the inflamed joint is never produced, even though very forcible manipulations are employed.

When the venous and lymphatic systems have, in this way, been prepared for the absorption of pathological products, we are ready to proceed to massage proper of the diseased tissues.

In my division of the subject I follow MEZGER and his pupils BERGHMAN and HELLEDAY,(2) who describe only four methods of procedure; STROKING, FRICTION, KNEADING, and PERCUSSION.

This practical subdivision has been adopted by most of the more recent Masseurs, as for example, von HAUFE,(3) GAUTIER,(4) and LITTLE and FLETCHER.(5)

1. **Stroking** is done with the palm of the hand or its radial border, the thumb being abducted, and the force employed varying with the indications from the gentlest caress to the heavy pressure made by reinforcing the operating hand by the other laid on top of it. When old exudations are strung along between tendons and muscles, it is necessary to penetrate more deeply into the tissues with the fingers. This may be accomplished with the thumb alone or with several fingers, the tips being held nearly perpendicular to the surface, and pushed slowly forward, while the depth to which they penetrate is regulated by the degree of prominence of the indurations. In working over limited areas, and where the bone lies immediately below the surface, very moderate pressure must be made, the palms of one or both thumbs being brought into requisition. On the other hand, in situations where large muscular masses are

found, the hands must be so held that the fleshy cushions of the palm, corresponding to the thumb and the little finger, may be chiefly used, the relative positions of the operator and the patient being such that the former can utilize the weight of the upper part of his body in imparting emphasis to the stroke. The direction of the strokes is nearly always centripetal (toward the body or heart), but in rare cases, to be especially noted, it may be centrifugal (away from the body or heart.)

2. **Friction** consists in forcible, circular rubbing with the hand, especially with the tips of the fingers, alternated with firm centripetal stroking either with the same hand or the other hand. Over very small surfaces, the last phalanx of the thumb is used to perform this manipulation. The remaining fingers of the hand, or if need be of both hands, clasp the limb which is under treatment, and thus make use of it as a point of support. Inasmuch as it is the object of this mode of manipulation, as we shall see subsequently, to force out pathological deposits from diseased parts and distribute them through the surrounding healthy tissues, we should always begin just at the border of the pathologically altered tissue; and for the same reason there is little to choose as regards the direction in which the pressure shall be made, so long as it is towards sound tissue. It may even be centrifugal if healthy parts can thus be more readily reached. Only let it be borne in mind that friction must invariably conclude with centripetal stroking.

3. **Kneading**: By this term we understand picking

up a muscle or other portion of tissue, with both hands or with the fingers of one hand, and subjecting it to firm pressure, or fulling and squeezing it between the fingers on one side, and a dense underlying tissue, as for instance, bone, on the other. If we have to deal with a very small object, as, for example, a thickened tendon on the back of the hand (*ganglion*), we seize the tendon between the tips of both thumbs, taking care that the nails are cut short, and are thus able to subject it to firm pressure.

[Dr. Douglas Graham, of Boston, who unites in a greater degree than any one in this country the practical skill of an accomplished masseur, with the theoretical knowledge of an intelligent and educated physician, in his recent work, "*A Practical Treatise on Massage*," (17) gives some very useful general instructions as to the mode of procedure in friction and kneading, from which I quote: "1. All of the single or combined procedures should be begun moderately, gradually increased in force and frequency to their fullest extent desirable, and should end as gradually as begun. 2. The greatest extent of surface of the fingers and hands of the operator consistent with ease and efficacy of movement should be adapted to the surface worked upon, in order that no time be lost by working with the ends of the fingers, or one portion of the hands when all the rest might be occupied. 3. If too near the patient, the manipulator will be cramped in his movements; if too far away, they will be indefinite, superficial, and lacking in energy. 4. The patient

should be placed in an easy and comfortable position, with joints midway between flexion and extension . . . 6. The direction of the procedures should be almost invariably from the extremities to the trunk, from the insertion to the origin of the muscles, and in the direction of the returning currents of the circulation."

This author is the only one with whose writings I am acquainted, who attempts to define the rapidity with which the individual strokes should be given in stroking and friction. In stroking the hands from the finger tips to the wrist, he advises that from ninety to one hundred and eighty strokes, each including a light return stroke, be made per minute. The oval strokes with both hands, upon the arm or forearm, one hand descending as the other ascends, may be delivered at the rate of from seventy-five to one hundred and eighty, for each hand, which in point of fact constitutes from one hundred and fifty to three hundred and sixty strokes in the minute.

Below the knees, from the ankles up, they may number from one hundred to one hundred and sixty with each hand; above the knee from sixty to one hundred. Upon the back they will not reach more than from sixty to seventy-five. Kneading cannot be executed with as much rapidity as stroking and friction, owing to its more complex character. That of the separate fingers may be accomplished at the rate of from seventy-five to one hundred and fifty movements per minute, of the arms at very nearly the same rate; of the legs from sixty to ninety, and of the thighs from forty to eighty.

On the back these manipulations will average about one a second for each hand. A valuable feature of Dr. Douglas's work is his careful delineation of the various regions which may be advantageously included in a single application or procedure. He says: "From the wrist to the elbow, and from the elbow to the shoulder-joint are suitable extents of surface to be worked upon. As the lower limbs are larger than the upper, the lateral and posterior aspects from ankle to knee will form a convenient territory, while the lateral and anterior aspects will make another. He directs that the operator should stand facing the patient in treating the lateral and posterior aspects, and after having completed the friction here, without stopping the strokes, turn his back to the patient, and continue the operation on the anterior and lateral aspects, each thumb following the other, with tolerably firm pressure on the anterior tibial group of muscles. The same systematic division of surface may be made above the knees as below; but the operator's back to the patient will, on the whole, be the easiest and most efficacious way of applying friction to the thighs. . . . From the base of the skull to the spine of the scapula forms another region well bounded for downward and outward semicircular friction, and from the spine of the scapula to the base of the sacrum forms another surface, over which one hand can sweep, while the other works towards it, from the insertion to the origin of the glutei. . . . The chest should be done from the insertion to the origin of the pectoral muscles."

He very judiciously observes that in kneading, "each group of muscles should be systematically worked upon, and for this purpose one hand should be placed opposite the other, or, when the circumference of the limb is not great, one hand may be placed in advance of the other, the fingers of one hand partly reaching on to the territory of the other, so that two groups of muscles may be manipulated at the same time, with grasping, circulatory, spiral manipulations, one hand contracting as the other relaxes, the greatest extension of the tissues being upwards and laterally, and on the trunk, forearms, and legs away from the median line. . . It is well first to go over a surface gently and superficially before doing the manipulation more thoroughly and in detail." In kneading a leg of considerable size, he finds "three divisions of surface necessary; the posterior and lateral aspects will form one; the stretching of the peroneal muscles from those of the anterior tibial region . . . will make another, and for the third, a rolling of the tissues will be made away from the crest of the tibia. . . Above the knee one hand will grasp the adductors, while the other embraces the quadriceps extensor, and the alternate contraction and relaxation of the hands will be made in such a way as to stretch these two groups of muscles away from the line of the femoral artery. The posterior femoral region may next be gone over, which will principally engage the fingers, while the upper parts of the hands work upon the sides of the limb. The external aspect of the thigh may receive as vigorous kneading as it is possible to give with evenly

distributed force ; and with the thumbs in advance of each other on the *rectus femoris* more special and effectual manipulation can be given to the extensors, while the remaining surfaces of the hands make a review of the lateral aspects of the thigh.” In manipulating the back, “the muscles on each side of the spinal column can be rolled outwards with the ends of the fingers, and the supra-spinous ligament can be effectually treated by transverse to-and-fro movements. The ends of the fingers and part of their palmar surfaces should also be placed on each side of the spinous processes, and the tissues situated between these and the transverse (processes) worked by up-and-down motions parallel to the spine, taking care to avoid the too frequent error of making pushing, jerking movements, in place of smooth uniform motions in each direction.”]

Large masses of muscle may be seized with both hands and kneaded and squeezed in all directions much as one would squeeze water out of a full sponge. At the moment of making pressure, a certain amount of longitudinal traction may be superadded, which adds to the value of the manipulation. Another, but much less effective form of kneading, consists in rolling the limb between the palms of both hands. This movement should be made with great rapidity ; pressure is here a secondary consideration ; the principal effect is produced by the frequently-recurring stretching and forcible separation of the individual muscles, fasciæ, and nerves.

[Kneading is the procedure by means of which above

all the others we act upon the circulation of the deeper-seated tissues, and profoundly modify the processes of absorption, assimilation, and destruction, in short of tissue metamorphosis, in other words, of life. Hence our aim should be, to as great an extent as possible, to avoid allowing any motion between the hand and the surface of the skin, that is to say, friction or stroking, and to compel the integuments following the motion of the hands or fingers to describe the desired movements over the underlying tissues. We thus not only act upon the circulation of the blood in the muscular and visceral capillaries, but accomplish the very desirable objects of increasing the elasticity of the skin, opening the areolar lymph spaces, sundering pathological adhesions between the inferior layer of the skin and the tissues beneath, and stimulating the flow of the areolar fluid. Just to the extent that we allow rubbing do we lose the essential virtues of kneading.

VIBRATIONS constitute one modification of kneading. The alternate pressure and relaxation which are the essential feature of that form of massage are here made with great rapidity. While the hand may be made the medium of communication, few manipulators have at once the skill and the endurance to make the movements with the necessary rapidity and continue them for a sufficient length of time. Machinery is usually brought into requisition for this purpose, and by its aid, any portion of the body or extremities can be thrown into vibration at the rate of many hundred times a minute. The reflex, thermal and electrical effects of such a rapid agitation of the tissues are remarkable.

The sensation produced is very similar to that caused by a mild current of electricity. It is a powerful excitant to the capillary circulation, a stimulant to secretory action, and an awakener of dormant nervous energy. The same mechanical contrivance which deliver the vibrations may by a simple change of connection and of terminal appliances, be made to perform with considerable effectiveness the operations of friction and of ordinary kneading, but can never quite supply the place of the sentient and intelligent human hand in these procedures.]

4. **Percussion** (sometimes more appropriately described as clapping): Signifies striking and beating the part to be treated. This may be done either with the hand or with an instrument constructed for the purpose. Percussion with the hand is performed either with the palms of the hands, with their ulnar borders (the chopping of the French), with the tips of the fingers held closely together, with the closed fist, or with the dorsal surfaces of the first two joints of the fingers. No great amount of force need be used. On the contrary, the movements should be rather light, delivered from the wrist, and with considerable elasticity and rapidity.

In percussing with an instrument we usually avail ourselves of a Bennett's percussion hammer, either striking the surface directly with it, or making use of a thin plate of ivory as a shield.

GRANVILLE(6) has devised a percussor\* for this pur-

\* This instrument is manufactured by the English firm of WEISS & SON.

pose, driven by electricity, which within a given time delivers a given number of blows, with a degree of force which can be exactly regulated.

In muscle-clapping, we may avail ourselves of WEIL's(8) refreshers, or KLEMM's(7) muscle-beaters. The human hand, however, still remains the best instrument. In no other way can the degree of force employed be so surely measured and controlled.

On the conclusion of massage *active* and *passive movements* of the parts which have been manipulated may, when possible, be performed. Great importance has been recently attached to this after-treatment, many masseurs considering the active and passive exercises almost as valuable as massage itself. MEZGER early recognized the importance of this auxiliary manipulation, and declared it to be indispensable in the management of diseased joints. In the north, in Sweden and Norway, massage has been very generally combined with the Swedish Remedial Gymnastics, to the great advantage of both methods of treatment. According to the unanimous reports of the northern masseurs truly wonderful results have thus been attained in many chronic diseases.

Still it will not do to become routinists in this any more than in other forms of practice. In each individual case all the conditions must be taken into account, and the appropriate time for the commencement of these active and passive movements, as well as their duration and severity, must be carefully determined. In convalescence from acute inflammatory

affections much good may be done by allowing the patient to begin active movements before he leaves his bed. He should be instructed to make systematic movements of flexion and extension after the method laid down by SCHREIBER.\* When he begins to find these bed gymnastics tedious, he may be allowed to get up and go about his room, taking the precaution to protect the affected region with a flannel bandage as long as any fear exists of a return of inflammatory exudations.

It will not be out of place to advert just here to a circumstance which has occasionally proved an obstacle in the minds of physicians to the acceptance of massage, and has given rise to a false impression as to this mode of treatment. The objection has been made that it would overthrow a principle in the management of certain inflammatory diseases, which has been consecrated by the experience of centuries. Such a revolution must necessarily be looked upon with considerable suspicion. This principle is: *Rest to inflamed parts.* Now massage does not in the least affect this principle in general, or with regard to any diseases which are not appropriately treated by it. But, exactly as experience has taught that motion is injurious in the majority of inflammatory affections treated antiphlogistically, in like manner *has experience taught that when massage is used, active or passive exercise judiciously*

\* SCHREIBER: Aertzliche Zimmerymnastik. Leipzig, 1872, 17 Auflage.

administered is not only not injurious, but decidedly hastens the reparatory processes, and is, further, a preventive of many of the unfortunate sequelæ of such inflammations. It may not be easy to offer a scientific explanation of the above assertion, but the fact cannot be denied for, as has been said, experience has abundantly established it. We have then in the active and passive movements an important auxiliary to the remedial action of massage, and their employment will never prove harmful if they are prudently administered.

A method of application, in my opinion of great value, and not yet fully appreciated by physicians, is MASSAGE of the NECK, as first suggested by VON GERST.(10)

The mode of procedure is as follows: "The patient stripped to the middle of the chest, is instructed to stand with the head tilted a little back and the shoulders relaxed; the former because the operator does not become fatigued so quickly as when the patient is sitting, and the latter, because a broader surface of the neck is thus presented for manipulation. The patient must be enjoined to breathe quietly, regularly, and deeply during the operation; otherwise his entire attention will be engaged with the procedure, and he will breathe superficially and slowly, and occasionally even hold his breath altogether, thus impeding the return of the venous blood from the head and antagonizing the anticipated effect of the treatment.

The strokings are now begun. Each motion may be divided into three acts: First, the open hands with

the palms upwards are placed with their ulnar borders in the right and left cervical fossæ between the head and the neck, so that the tip of the little finger and the last joint of the ring finger shall rest upon the mastoid process behind the ear, and the ball of the little finger under the horizontal branch of the lower jaw. A centripetal movement is now begun with the ulnar borders of the palms thus placed in the superior cervical region, and is performed as follows: While the ulnar border is moving toward the middle of the neck, both hands perform a rotation on their long axes, so that the radial border turns upwards and inwards towards the head, and finally reaches the position at first occupied by the ulnar border. By means of this rotation, the entire palm has come into contact with the neck and is now employed in giving the stroking. Meanwhile the operator must be careful to exert a moderate degree of pressure with the balls of the outstretched thumbs upon the right and left common jugular veins, and with the palmar surfaces of the fingers upon the venous and lymphatic vessels which course along the lateral cervical regions. Arrived at the supra-clavicular fossa, the hand again turns upon its long axis, and the radial border of the palm once more comes into play.

During the movement in the superior cervical region all pressure upon the lateral cornua of the hyoid bone must be avoided, as this would cause pain and inclination to cough; and for the same reason, in stroking in the middle of the neck, the balls of the thumbs must not be allowed to press upon the larynx, but leaving it free

between them, should simply move backwards along its sides.”

GERST sometimes permits the patient to perform neck-massage upon himself. The procedure consists in this: The patient holding his head slightly tipped backwards, uses but one hand at a time, alternating them at each stroking. For this purpose, the neck having been well anointed, he places the outstretched palm with the thumb partially abducted beneath the lower jaw, so that the thumb lies upon one side of the neck and the four fingers upon the other. While now the hand executes a tolerably rapid movement downwards, the thumb is making firm pressure upon the corresponding common jugular vein, and the fingers are emptying the superficial veins of the opposite side of the neck. As soon as the right hand has in this way completed the act, it is at once followed by the left, and so on. The strokings should follow one another in rapid succession, and the same precaution should be suggested as to pressure upon the hyoid bone and larynx as before.

WEISS(11) has suggested another mode of cervical massage, especially adapted to children and persons having thin and slender necks. In the case of a child it is placed in the nurse’s lap, and the head held somewhat tilted backward. The physician sits in front of the child, and having previously oiled his thumbs, joins the fingers of both hands over the cervical vertebrae. The thumbs thus reach forward to the larynx and the neck is completely embraced. Downward strokings are now made with the thumbs, at first slow and gentle,

and gradually increasing in rapidity and severity. The thumbs pass from the border of the lower jaw downwards as far as the clavicles, now stroking the region of the common jugular vein and now the lateral regions of the larynx. When the clavicles have been reached, the thumbs are again transferred to the lower border of the jaw without touching the neck.

HÖFFINGER performs cervical massage as follows: The patient sits on a chair with a high seat, the head bent somewhat backwards, and the neck, throat, and upper part of the chest uncovered. The masseur stands behind the patient, places the fingers of both hands in the groove beneath the lower jaw, and strokes rapidly downwards and outwards with moderate and equable pressure, the thumbs being directed posteriorly and not touching the surface, and the arms moving easily and lightly from the shoulders and elbows. The method has these advantages, that it reduces the pressure upon the larynx to a minimum, and that the sitting can be concluded without fatigue to either party. The patient breathes more quietly and regularly, too, than when the masseur is sitting in front of him.

Cervical massage is simple, easily acquired, and very efficacious. The objection to self-massage is that a smaller surface is acted upon, and therefore the superficial veins are not so generally depleted. It is also fatiguing to the patient, and on the whole is only to be recommended to a very limited extent, and as a supplement to the operations of the physician. HÖFFINGER's method must be designated as the best, and the most con-

venient for both patient and operator. Whatever be the method employed, the aim must be kept constantly in view of inducing the patient to *inspire deeply and forcibly* during the operation, since the diminished pressure thus produced in the thorax powerfully invites the returning venous current already quickened by the massage; and so far heightens the desired result.

[The author here devotes considerable space to a detailed description of a procedure introduced by a Swede named KELLGREN, for the treatment of acute congestions and inflammations of the lungs. Notwithstanding that its originator claims to have used it with great success, and that it has met with considerable favor in England, it appears to me so chimerical—not to say dangerous—that I do not care to undertake the responsibility of introducing it into American medical literature. Indeed, REIBMAYR himself confesses that he has “given the description of this method a place simply for the sake of completeness,” and points out the danger of its use in the presence of organic disease of the heart.]

I proceed at once, therefore, to the consideration of ABDOMINAL MASSAGE. In employing this manipulation, it is of especial importance to warn the patient against antagonizing the treatment by voluntarily or involuntarily stiffening the abdominal muscles, and thus diminishing, or it may be, even entirely preventing its physiological action. It will aid him in this effort if he be placed with the trunk elevated, and the feet drawn up, and directed to breathe quietly and regularly.

LAISNÉ(13) describes the method as follows: The

masseur lays his hands on either side of the abdomen, and executes a firm but not violent double rubbing movement, one hand ascending as the other descends, the principal pressure being made by the thenar and hypothenar eminences, and not going higher up than the *transverse colon*, or lower down than the *ileum*. On reaching the *cæcum*, the colon is to be followed along its ascending, transverse, and descending portions successively. This manipulation is to be repeated two or three times.

After a long trial of LAISNÉ's method, I have concluded that it is not thoroughly practical, and have substituted the following of my own devising. It is composed of four distinct manipulations which I employ according to the indications, either singly or combined. If I have principally in view stimulation of the peristaltic movement of the intestines by reflex action, I make use of the first and second, but if I wish to act mechanically upon the intestinal contents, I superadd to the second the third or the fourth, or employ all three at once.

*First Manipulation.*—This consists in tracing circles around the umbilicus with the tips of the three long fingers of the right hand the end of the thumb lying sideways upon the surfac. of the abdomen, and serving as a *hypomochlion*, for the motion which is taking place through the joints of the finger and hand. To make the application more powerful, the circles are enlarged, and the pressure is made alternately heavier and lighter. The thumb meanwhile remains inactive. This manipulation is extremely irritating, nervous per-

sons, women especially, often being unable to endure it. In that case, the following manœuvre must be resorted to.

*Second Manipulation.*—The finger tips now remain inactive, and the circles around the navel are described with the palm of the hand. To accomplish this, the hand is extended as strongly as possible, so that it stands nearly at a right angle with the long axis of the forearm. The force is exerted principally by the heels of the thumb, and of the little finger. The fingers, slightly flexed, follow the movements of the hand without exercising the least pressure. This manœuvre is always well borne, and combines a certain amount of mechanical action with the reflex stimulation. However forcibly it is employed, it very rarely causes pain.

The two following manipulations aim especially at producing a mechanical effect upon the intestinal contents. They are therefore to be applied over those regions in which the feces are known to remain longest, and where the intestinal walls are therefore most likely to become distended and their muscles be weakened, namely, the *cæcum* and the sigmoid flexure.

*Third Manipulation.*—In this the right hand is to be laid flat upon the right inguinal region, the tips of the fingers pointing downwards. The left hand must then make pressure upon the first phalanges of the right, and stroking be performed with both hands in this position, from below and within, upwards and outwards, following the course of the *cæcum*. In returning to

the point of departure the hands pass down over the navel, making scarcely any pressure. The use of the left hand is not simply to reinforce the right, but to prevent flexion of the fingers, and thus keep the entire hand closely applied to the surface throughout the entire stroke.

*Fourth Manipulation.*—This is similar to the preceding, except that it is applied upon the opposite side of the abdomen, and the tips of the fingers are directed upwards towards the spleen. The movement is, correspondingly, from above and without, downwards and inwards, and the nearer we approach the lesser pelvis, the more deeply do we endeavor to bury the phalanges in it. The patient in receiving this manipulation should be reclining with the body at an angle of 45°, and the knees semiflexed, while the operator kneels or sits close to the right side, reaching across the abdomen. If the patient is in bed, the manipulator usually stands, being able thus to exert the greatest amount of force and at the same time to call to his aid the weight of the upper part of the body.

When we have to deal with a case of excessive torpor of the bowels, or when a large accumulation of fat is associated with great muscular relaxation, it is advisable to make use of an assistant in administering the second manipulation. This is thus accomplished. The patient sits erect on a high-backed chair. The manipulators stand one on either side with a hand resting on the patient's shoulder. Their other hands are then joined in front of the patient's abdomen, and strong

circular strokings made about the umbilicus with their combined strength. This form of massage, much in vogue with the practitioners of the Swedish movement cure, is very efficient, stimulating the functions of the abdominal organs in the highest degree. It is employed principally in the case of men.

In these cases of torpidity, I also add to the above described manipulations, percussion of the abdomen. This, however, must be of very brief duration, since, as the experiments of GOLTZ have taught us, long-continued clapping of the abdominal walls, results in relaxation of the muscular and vascular systems of the coats of the intestines.

GENERAL MASSAGE OF THE BODY so called must not be omitted. This consists in quite firm centripetal stroking of the entire surface, especially of that of the limbs and back. As it is principally made use of in the case of patients who suffer from sluggish digestion, it almost invariably terminates with kneading of the abdomen.

Massage of individual organs, as for instance the uterus and the eye, will be more appropriately described in the tracts especially devoted to those subjects.

In conclusion, I beg to offer a few general hints upon the art of massage.

The position of the portion of the body which is to be treated, must be such as to cause the least possible discomfort and fatigue to both physician and patient. The diseased surfaces should be divested of all covering, and especial care should be taken that all impedi-

ments to the free return of the blood and lymph toward the centre, such as ligatures and close-fitting garments should be removed. In this respect I am unable to agree with SCHREIBER,(9) who counsels that especially in the case of women, the surface should be covered with flannel. This plan possesses no advantage, and the blunting of the sensation in the fingers of the operator is a positive disadvantage. In a prolonged séance, too, the skin is much more irritated by the roughness of the flannel than by the anointed hand.

The object of sparing the woman's modesty, which must be the only reason, as SCHREIBER mentions no other, can be attained in other ways without sacrificing the efficiency of the treatment.

[In deciding this important question we must be governed to a great degree by the region on which we are operating, and the object of the treatment. But little can be accomplished in the relief of inflamed joints or the cure of sprains by working outside the clothing. On the other hand, in general medical treatment, in the majority of cases little or nothing is to be gained by having the surface actually nude. Fortunately this distinction, as a rule, enables the operator so to shape his requirements in this respect as to do the least possible violence to the modesty of his female patients.]

If the surface to be treated has a heavy growth of hair upon it, this should be shaved off. Otherwise, inflammation of the hair-bulbs may be produced by pulling the hairs, and the recovery thus be delayed.

Massage may be performed dry or with the aid of oil, lard, or vaseline. If we desire to produce a powerful derivative action towards the surface, and have in view the reflex, thermal, and electrical influences of massage, we employ it dry. If, on the other hand, the operation is to be prolonged, and if the more mechanical effects are sought, both the hands of the operator and the surface to be treated should be oiled or anointed.

Vaseline and ordinary lard are the best materials.\* When the patient is extremely sensitive, a little laudanum added to simple ointment will prove soothing. In the case of narrow-minded people who find the simplicity of the treatment an obstacle to placing confidence in it, it may be well also to make some innocent addition to the lubricating material, as a placebo.

[When we are obliged to use long-continued firm stroking or friction over a somewhat limited area, as in the treatment of sprains or of articular inflammations, it will undoubtedly be advisable to employ a lubricant. Especially is this the case when it is desired to promote the absorption of extravasations, the removal of old deposits, and of effusions into the cavities of joints. But in general massage where large regions of the body are rapidly gone over, this can never be necessary. Of course, I do not undervalue the beneficial effects of inunction in wasting diseases, especially in conjunction with massage following the Turkish bath, but they are

\* In this country cocoa-butter is a favorite substance for this purpose, as its odor is more agreeable to most patients than that of any oil or fat.

quite distinct from those we are considering. It may be said in a general way that when we are employing massage for surgical affections, the use of an unguent is appropriate; but that when we are treating general or medical disorders, it is not called for. Of course, the intervention of such an agent would be a direct obstacle to stimulation of the surface circulation, and inviting the blood into the capillaries of the integument, and must be avoided when our object is primarily derivative. Dr. Graham is of the opinion that a truly skilful masseur will never need to resort to this expedient for protecting the skin of his patient, and also denies that it is ever necessary to shave the surface, instancing the fact that massage of the scalp can be performed without painful traction on the hairs. The cases, however, are scarcely parallel, since the hair of the head forms a thick layer, which moves in unison with the scalp itself, and may be looked upon as a part of the integument which is not at all the case with the isolated and straggling hairs of other surfaces.]

The answer to the question: "How often should massage be administered?" naturally depends to a great extent upon the nature of the disease, and cannot, therefore, be formulated in a general way. As far as possible, the question should be decided with reference to the individual case.

The duration of the séance, too, must be governed by the disposition and endurance of the patient, as well as by the amount of surface to be operated upon. As an average, ten minutes suffices for each particular

region when oil is used, and from to two five when it is dispensed with.

*Much force should never be employed in dry massage.* If this rule is neglected, a denudation of the corion from the epidermis—an excoriation—will quickly be produced, and continuance of the treatment will thus be rendered impossible.

Every masseur is compelled at the outset of his career to observe a large number of black and blue spots, the result of his excessive zeal. This is not, as many suppose, essentially necessary, nor is it calculated to shorten the duration of the treatment, or to aid in any way in the cure of the case. These little extravasations are usually the result of too severe, and particularly, of too rigid massage. The more expert the manipulator becomes, the rarer will be their appearance. In cases, however, where we have to make pressure upon fungous or spongy tissues, or masses of organized exudation, the rupture of minute vessels cannot, of course, be avoided. In all other cases, and especially where our object is simply to disgorge the blood and lymph channels, in order to remove recent inflammatory products, it is entirely unnecessary to use sufficient force to produce these appearances. On the other hand, moderately firm, gentle, and well-distributed massage is in most cases both more acceptable to the patient, and easier for the manipulator. The former is thus spared severe and unnecessary pain, and becomes more readily reconciled

to the treatment, and the latter is able to conclude the séance without excessive fatigue.

Very recently a new modification of massage has been recommended to us from America, the so-called "*Electro-massage*." In this method massage and electricity are administered in combination by means of very broad, sponge-covered electrodes. Appropriate instruments have been devised for the purpose by Post(15) and STEIN(16). For the greater convenience of the physician, the latter inventor places the battery inside of one of the electrodes. The idea of supplementing massage by the use of the electrical current in certain cases had already been suggested, particularly by MEZGER. In electro-massage, this combined administration may be more convenient for the physician, but can scarcely be more advantageous to the patient. On the contrary, in so far as the hand is substituted by an instrument, massage loses its efficacy. Nor would any electro-therapeutist be satisfied with this mode of applying the current.

Massage, it must be insisted on finally, is no exclusive method of treatment, as, for instance, hydropathy long continued to be made, greatly to its own detriment. It desires to be regarded as constituting only a modest department of our therapeutic treasury. Other methods of treatment may, therefore, be judiciously employed in connection with it. Of electricity we have just spoken. It is also often advantageously used in conjunction with cold water applications. The combination of massage with baths, whether ordinary, thermal,

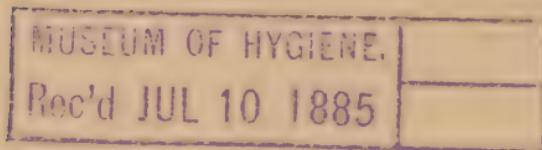
mud, sulphur, or salt baths, is in direct correspondence with its physiological effects and therefore very important. In warm baths the skin becomes vascular, soft and supple, and the dilated vessels and lymph-ducts offer the physician a favorable opportunity for its employment. The conditions of life at a bathing resort are also highly favorable toward carrying out such plans of treatment, so that the results of this combination will in the majority of cases be far more favorable than those of the present routine of baths alone.

Like every other medical accomplishment, massage must be acquired. Although it is not strictly true as PODRATZKY(14) thinks, that it can only be learned by dissection, still, in the course of my travels through Germany, Holland, and Belgium, undertaken with this very object, I became convinced that there are certain advantages of method which a self-educated manipulator will arrive at only with difficulty and perchance after years of practice, but which one may acquire in a comparatively brief time under the guidance of an experienced and trained masseur. It is therefore highly advantageous to learn the art either at a clinic, or from a masseur of good repute. Every young practitioner will to day bring with him from his practical studies a knowledge of this art, since a surgical or obstetrical clinic can scarcely exist in which it is not both taught and practised as an important branch of treatment. Lastly, a still more important point, the neglect of which has already done the system great injury, must be insisted on: *Every Physician should himself be a*

*Masseur*, and should never confide this important manipulation to the unpractised hands of an ignorant servant or attendant. The skilful performance of massage demands at least as much ability, anatomical and medical knowledge, and above all correct comprehension of the process itself, as the application of an antiseptic dressing. And what intelligent surgeon would entrust the application of such a dressing to an unprofessional hand? Only in rare individual cases, when one is well satisfied of the dexterity of the person, should any exception to this rule be allowed. [If then the physician knows how, and can spare the time, he will do it himself. If, as is more probable, he does not know how or has not the time to devote to it, he will employ an experienced masseur or manipulator to do it in his stead, but simply for the reasons stated, and not because it is in any way beneath his dignity to do it himself.

What then shall guide him in his choice of a manipulator? He or she, for both sexes may succeed admirably as *masseurs* or *massenses*, must possess, first, vigorous health; secondly, muscular strength; thirdly, a cheerful temperament, a pleasant face, and an acceptable manner; fourthly, a soft and pliant but strong hand; fifthly, a fair education, and a certain amount of refinement; sixthly, a knowledge of the leading facts in anatomy, such as the position of the various organs, the position and course of the larger arteries, veins, and nerves, and of such facts in physiology as the functions of the various organs, the course of the circulation, and the general processes of nutrition; and, seventhly, and

lastly, an acquaintance with the effects produced by the different forms of manipulation, the order in which these different forms should be employed in order to produce certain general effects, the injury which may be inflicted by employing them improperly or out of their proper order, and a practical dexterity in their application, to be attained only by training under an experienced instructor. Hence, it will be understood that we cannot take John from the stable or Biddy from the washtub, and, in one easy lesson, convert either into a safe, reliable, and efficient manipulator. Massage is an art, and as such must be acquired by study and patient practice, under competent guidance. It cannot be picked up at an hour's notice by any broken-down nurse or disappointed cobbler. As certainly as a trained nurse is superior to an untrained, so certainly, even more certainly, is a trained and well-instructed manipulator better than a self-taught "rubber." In this as in every art, in the words of the great Roman lawyer, *quam quisque nōrit artem in hāc se exerceat.*]



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